REMARKS

Applicant's claims have been amended to better clarify Applicants' claimed invention. Independent claim 22, as amended herein, recites a device which includes an electrically insulating first coating encapsulating said elastomeric member, wherein said first coating prevents release from said thermally conductive assembly of one or more substances emitted by said elastomeric member. Support can be found in the Specification at Page 7 / Lines 19-23; FIGs. 1A, 2, 3, 4, 5; Claim 1; and Claim 14.

Claim 23, as amended herein, recites a device which comprises a circuit substrate, a plurality of heat generating components disposed on one side of said circuit substrate, wherein two or more of said plurality of heat dissipating components have differing heights above said circuit substrate. Support can be found in the Specification at Page 17 / Lines 11 - 20; Page 17 / Line 21 through Page 18 / Line 8; Page 18 / Lines 9 - 16; Page 18 / Line 17 through Page 19 / Line 1; Page 19 / Lines 2 - 8; and FIGs. 7, 8, 9, 10, 11 (Step 1210).

No new matter has been entered. Reexamination and reconsideration of the application, as amended, is respectfully requested.

Claims 23, 25, and 26, stand rejected under Section 112, second paragraph, as being indefinite. Claim 23 is amended herein to cure this Section 112 rejection. Claims 25 and 26 are amended herein to delete the species "perfluoroalkoxy Teflon".

Claims 22 - 35 stand rejected under Section 112, first paragraph, as being based upon a disclosure which is not enabling. Claim 22, as amended herein, recites a coating encapsulating a thermally conductive elastomer, thereby curing the rejections under Section 112, first paragraph.

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Claims 22 - 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over either Yamaguchi (USPN 6,046,907) or Chomerics product literature, each taken individually, or in view of Peterson (USPN 5,011,870.

Applicant responds as follows. It is well-settled that "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." MPEP 2143.03; *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Applicants' claim 22, as amended herein, recites a device which includes a thermally conductive elastomeric member and an electrically insulating coating encapsulating that elastomeric member, wherein that coating prevents release from the thermally conductive assembly of one or more substances emitted by the elastomeric member.

Yamaguchi teaches a heat conductor comprising a heat conductive layer and a "potentially adhesive layer" which is disposed integrally with the heat conductive layer. Col. 1 / Line 61 - Co. 2 / Line 1. Yamaguchi nowhere teaches or suggests a device which includes a thermally conductive member encapsulated by an electrically-insulating coating.

In fact, Yamaguchi teaches away from Applicants' claim 22, as amended herein. "A reference may be said to teach away when a person of ordinary skill, upon reading the reference . . . would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed.Cir. 1994).

Yamaguchi's heat conductor includes "a small hole 23 which extends from a potentially adhesive surface 24 . . . to the heat conductive later 10." Col. 3 / Lines 62 - 65. Yamaguchi's FIG. 3B shows aperture 23 formed in layer 24. FIG. 3B further shows one or more components comprising layer 10 exuding out of aperture 23.

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One of ordinary skill in the art following the teachings of Yamaguchi would form a heat conductor comprising a laminate structure having a heat conductor layer disposed on an adhesive layer, where that adhesive layer includes an aperture such that one or more components from the heat conductor layer can be released therefrom and emitted from the laminate device. On the other hand, one of ordinary skill in the art following the teachings of Yamaguchi would find no motivation to prepare a device comprising a thermally conductive member encapsulated by an electrically-insulating coating, as recited in Applicant's claim 22, as amended herein.

Applicant respectfully submits that the Chomerics product literature nowhere teaches or suggests a device comprising a thermally conductive member encapsulated by an electrically-insulating coating, as recited in Applicant's claim 22, as amended herein.

Peterson teaches "an improved organosiloxane composition comprising a polyorganosiloxane and a finely divided solid thermally conductive filler." Col. 2 / Lines 58 - 60. Peterson's composition comprises a gel or a grease. Col. 4 / Lines 63 - 64. Peterson teaches that "[i]t will be understood by those skilled in the art that the absence of voids is essential to achieving the maximal thermal conductivity from a given filler." Col. 3 / Lines 57 - 59. Peterson further teaches that "[t]his invention is based on the synergism of the present filler combinations with respect to the thermal conductivity exhibited by the organosiloxane composition and the rheological properties of the composition." Col 3 / Lines 44 - 47.

Applicant trust the Examiner will appreciate that Peterson teaches a thermally conductive paste composition. Peterson nowhere teaches or suggests use of a thermally conductive member. Moreover, Peterson nowhere teaches or suggests a device comprising a

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thermally conductive member encapsulated by an electrically-insulating coating, as recited in Applicant's claim 22, as amended herein.

Applicant respectfully submits that Yamaguchi, Chomerics, and Peterson, singly or in combination, nowhere teach or suggest a device comprising a thermally conductive member encapsulated by an electrically-insulating coating, as recited in Applicant's claim 22, as amended herein.

This being the case, Applicants further respectfully submit that claim 22, as amended herein, is patentable over Yamaguchi, Chomerics, individually, or in view of Peterson. Therefore, Applicant respectfully submit that the rejection of claim 22 has been successfully traversed.

Claims 23 - 35 depend, directly or indirectly, from claim 22. Under 35 U.S.C. § 112, dependent claims are construed to contain all of the limitations of the independent claim from which they depend in addition to their own limitations. "If an independent claim is nonobvious under 35 USC 103, then any claim depending therefrom is nonobvious. MPEP 2143.03; *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed.Cir. 1988). Therefore, Applicant respectfully submits that the rejections of claims 23 - 35, as amended herein, under 35 U.S.C. § 103(a) have also been successfully traversed.

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Having dealt with all of the outstanding objections and/or rejections of the claims, Applicant submits that the application as amended is in condition for allowance, and an allowance at an early date is respectfully solicited. In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account No. 502262.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 on March 9, 2004, at Tucson, Arizona.

By

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EXHIBIT "1"

LISTING OF CLAIMS

U.S. SERIAL NO.: 10/041,111

DOCKET: TUC920000094US1

1. (withdrawn) A thermally conductive assembly, comprising:

a flexible, thermally conductive elastomeric member comprising a first side, an opposing second side, and a plurality of edges connecting said first side and said second side; and

an electrically insulating first coating encapsulating said elastomeric member, wherein said first coating prevents release from said thermally conductive assembly of one or more substances emitted by said elastomeric member.

2. (withdrawn) The thermally conductive assembly of claim 1, wherein said first coating further comprises:

an inner layer having a first side and an opposing second side;

an outer layer having a first side and an opposing second side;

wherein said first side of said inner layer is disposed adjacent said elastomeric member; and

wherein said second side of said inner layer is disposed adjacent said first side of said outer layer.

3. (withdrawn) The thermally conductive assembly of claim 2, wherein said inner layer is formed from the group consisting of natural rubber, polybutadiene, polyisoprene, polystyrene, polyethylene, polychlorotrifluoroethylene, polytetrafluoroethylene, perfluoroalkoxy Teflon®, ethylene / chlorotrifluoroethylene copolymer, ethylene / tetrafluoroethylene copolymer, polypropylene, polyethylene / polypropylene copolymer, fluorinated ethylene-propylene copolymer, polyethylene terephthalate, polypropylene terephthalate, polybutylene terephthalate, polynaphthalene terephthalate, polyvinylacetate, polyamide, polyimide, polyamideimide, polyurethane,

polyvinyl fluoride, polyvinylidene fluoride, polyvinyl chloride, polyvinylidene chloride, and mixtures thereof.

4. (withdrawn) The thermally conductive assembly of claim 2, wherein said outer layer is formed from the group consisting of natural rubber, polybutadiene, polyisoprene, polystyrene, polyethylene, polychlorotrifluoroethylene, polytetrafluoroethylene, perfluoroalkoxy Teflon®, ethylene / chlorotrifluoroethylene copolymer, ethylene / tetrafluoroethylene copolymer, polypropylene, polyethylene / polypropylene copolymer, fluorinated ethylene-propylene copolymer, polyethylene terephthalate, polypropylene terephthalate, polybutylene terephthalate, polynaphthalene terephthalate, polyvinylacetate, polyamide, polyimide, polyamideimide, polyurethane, polyvinyl fluoride, polyvinylidene fluoride, polyvinyl chloride, polyvinylidene chloride, and mixtures thereof.

5. (withdrawn) The thermally conductive assembly of claim 1, further comprising a metal layer disposed between said first side of said inner layer and said elastomeric member.

6. (withdrawn) The thermally conductive assembly of claim 5, wherein said metal layer comprises aluminum.

7. (withdrawn) The thermally conductive assembly of claim 1, wherein said thermally conductive assembly comprises a first surface and an opposing second surface, further comprising a semi-solid material disposed on said first surface.

8. (withdrawn) The thermally conductive assembly of claim 7, further comprising a semi-solid material disposed on said second surface.

9. (withdrawn) The thermally conductive assembly of claim 7, further comprising a pressure sensitive adhesive disposed on said second surface.

10. (withdrawn) The thermally conductive assembly of claim 1, wherein said thermally conductive assembly comprises a first surface and an opposing second surface, further comprising a plurality of hydrocarbons disposed on said first surface.

11. (withdrawn) The thermally conductive assembly of claim 10, further comprising a plurality of hydrocarbons disposed on said second surface.

12. (withdrawn) The thermally conductive assembly of claim 10, further comprising a pressure sensitive adhesive disposed on said second surface.

13. (withdrawn) The thermally conductive assembly of claim 1, wherein said thermally conductive assembly comprises a first surface and an opposing second surface, further comprising a pressure sensitive adhesive disposed on said first surface.

14. (withdrawn) A method to form a flexible thermally conductive assembly, comprising the steps of:

providing a flexible, thermally conductive elastomeric member comprising a first side, an opposing second side, and a plurality of edges connecting said first side and said second side;

heating said elastomeric member at a reduced pressure;

removing volatile components from said elastomeric member; and

encapsulating said elastomeric member with an electrically-insulating first coating.

15. (withdrawn) The method of claim 14, further comprising the step of extracting said elastomeric member using a solvent.

16. (withdrawn) The method of claim 14, wherein said disposing step further comprises the steps of:

forming a flexible enclosure;

inserting said elastomeric member into said flexible enclosure; and

sealing said flexible enclosure.

17. (withdrawn) The method of claim 14, wherein said disposing step further comprises the steps of:

providing a first sheet of polymeric material;

providing a second sheet of polymeric material;

disposing said elastomeric member between said first sheet of polymeric material and said second sheet of polymeric material; and

bonding said first sheet of polymeric material to said second sheet of polymeric material adjacent each of said plurality of edges.

18. (withdrawn) The method of claim 14, further comprising the step of disposing a second coating on said first coating.

19. (withdrawn) The method of claim 18, wherein said second coating comprises a pressure sensitive adhesive.

20. (withdrawn) The method of claim 18, further comprising the step of disposing a third coating on said first coating.

21. (withdrawn) The method of claim 20, wherein said third coating comprises a plurality of hydrocarbons.

22. (currently amended) A device, comprising:

an enclosure;

a plurality of heat dissipating components disposed within said enclosure; and

a flexible thermally conductive assembly disposed between said plurality of heat dissipating electrical components and said enclosure, wherein said flexible thermally conductive assembly comprises:

a flexible, thermally conductive elastomeric member comprising a first side, an opposing second side, and a plurality of edges connecting said first side and said second side; and

an electrically insulating first coating encapsulating ~~disposed on~~ said elastomeric member, wherein said first coating prevents release from said thermally conductive assembly of one or more substances emitted by said elastomeric member.

23. (currently amended) The device of claim 22, further comprising a circuit substrate, wherein said plurality of heat dissipating components are disposed on one side of said circuit substrate, and wherein two or more of said plurality of heat dissipating components have differing heights above said circuit substrate ~~wherein said plurality of heat dissipating electrical components have differing dimensions~~.

24. (original) The device of claim 22, wherein said first coating further comprises:

an inner layer having a first side and an opposing second side;

an outer layer having a first side and an opposing second side;

wherein said first side of said inner layer is disposed adjacent said elastomeric member; and

wherein said second side of said inner layer is disposed adjacent said first side of said outer layer.

25. (currently amended) The device of claim 24, wherein said inner layer is formed from the group consisting of natural rubber, polybutadiene, polyisoprene, polystyrene, polyethylene, polychlorotrifluoroethylene, polytetrafluoroethylene, ~~perfluoroalkoxy Teflon®~~, ethylene / chlorotrifluoroethylene copolymer, ethylene / tetrafluoroethylene copolymer, polypropylene, polyethylene / polypropylene copolymer, fluorinated ethylene-propylene copolymer, polyethylene terephthalate, polypropylene terephthalate, polybutylene terephthalate, polynaphthalene terephthalate, polyvinylacetate, polyamide, polyimide, polyamideimide, polyurethane, polyvinyl fluoride, polyvinylidene fluoride, polyvinyl chloride, polyvinylidene chloride, and mixtures thereof.

26. (currently amended) The device of claim 24, wherein said outer layer is formed from the group consisting of natural rubber, polybutadiene, polyisoprene, polystyrene, polyethylene, polychlorotrifluoroethylene, polytetrafluoroethylene, ~~perfluoroalkoxy Teflon®~~, ethylene / chlorotrifluoroethylene copolymer, ethylene / tetrafluoroethylene copolymer, polypropylene, polyethylene / polypropylene copolymer, fluorinated ethylene-propylene copolymer, polyethylene terephthalate, polypropylene terephthalate, polybutylene terephthalate, polynaphthalene terephthalate, polyvinylacetate, polyamide, polyimide, polyamideimide, polyurethane, polyvinyl fluoride, polyvinylidene fluoride, polyvinyl chloride, polyvinylidene chloride, and mixtures thereof.

27. (original) The device of claim 24, further comprising a metal layer disposed between said first side of said inner layer and said elastomeric member.

28. (original) The device of claim 27, wherein said metal layer comprises aluminum.

29. (original) The device of claim 22, wherein said flexible thermally conductive assembly further comprises a first surface and a second surface, further comprising a semi-solid material disposed on said first surface.

30. (original) The device of claim 29, wherein said flexible thermally conductive assembly further comprises a semi-solid material disposed on said second surface.

31. (original) The device of claim 29, wherein said flexible thermally conductive assembly further comprises a first surface and a second surface, further comprising a pressure sensitive adhesive disposed on said second surface.

32. (original) The device of claim 22, wherein said flexible thermally conductive assembly further comprises a first surface and a second surface, further comprising a plurality of hydrocarbons disposed on said first surface.

33. (original) The device of claim 32, further comprising a plurality of hydrocarbons disposed on said second surface.

34. (original) The device of claim 32, further comprising a pressure sensitive adhesive disposed on said second surface.

35. (original) The device of claim 32, wherein said flexible thermally conductive assembly further comprises a first surface and a second surface, further comprising a pressure sensitive adhesive disposed on said first surface.

36. (withdrawn) A method to transfer heat from a plurality of heat-dissipating components disposed within an enclosure, comprising the steps of:

disposing a thermally conductive assembly between said plurality of heat-dissipating

components and said enclosure;

conducting heat generated by said heat-dissipating components through said flexible thermally conductive assembly to said enclosure;

wherein said flexible thermally conductive assembly comprises:

a flexible thermally conductive elastomeric member comprising a first side, an opposing second side, and a plurality of edges connecting said first side and said second side; and

an electrically-insulating first coating encapsulating said elastomeric member.

37. (withdrawn) The method of claim 36, further comprising the step of preventing release from said thermally conductive assembly of one or more substances emitted by said elastomeric member.

38. (withdrawn) The method of claim 36, wherein said first coating further comprises:

an inner layer having a first side and an opposing second side;

an outer layer having a first side and an opposing second side;

wherein said first side of said inner layer is disposed adjacent said elastomeric member; and

wherein said second side of said inner layer is disposed adjacent said first side of said outer layer.

39. (withdrawn) The method claim 38, wherein said inner layer is formed from the group consisting of natural rubber, polybutadiene, polyisoprene, polystyrene, polyethylene, polychlorotrifluoroethylene, polytetrafluoroethylene, perfluoroalkoxy Teflon®, ethylene / chlorotrifluoroethylene copolymer, ethylene / tetrafluoroethylene

copolymer, polypropylene, polyethylene / polypropylene copolymer, fluorinated ethylene-propylene copolymer, polyethylene terephthalate, polypropylene terephthalate, polybutylene terephthalate, polynaphthalene terephthalate, polyvinylacetate, polyamide, polyimide, polyamideimide, polyurethane, polyvinyl fluoride, polyvinylidene fluoride, polyvinyl chloride, polyvinylidene chloride, and mixtures thereof.

40. (withdrawn) The method claim 38, wherein said outer layer is formed from the group consisting of natural rubber, polybutadiene, polyisoprene, polystyrene, polyethylene, polychlorotrifluoroethylene, polytetrafluoroethylene, perfluoroalkoxy Teflon®, ethylene / chlorotrifluoroethylene copolymer, ethylene / tetrafluoroethylene copolymer, polypropylene, polyethylene / polypropylene copolymer, fluorinated ethylene-propylene copolymer, polyethylene terephthalate, polypropylene terephthalate, polybutylene terephthalate, polynaphthalene terephthalate, polyvinylacetate, polyamide, polyimide, polyamideimide, polyurethane, polyvinyl fluoride, polyvinylidene fluoride, polyvinyl chloride, polyvinylidene chloride, and mixtures thereof.

41. (withdrawn) The method claim 38, wherein said flexible thermally conductive assembly further comprises a metal layer disposed between said first side of said inner layer and said elastomeric member.

42. (withdrawn) The method claim 41, wherein said metal layer comprises aluminum.

43. (withdrawn) The method of claim 36, wherein said flexible thermally conductive assembly further comprises a first surface and a second surface, further comprising a semi-solid material disposed on said first surface.

44. (withdrawn) The method of claim 43, further comprising a semi-solid material disposed on said second surface.

45. (withdrawn) The method of claim 36, further comprising a pressure sensitive adhesive disposed on said second surface.

46. (withdrawn) The method of claim 36, wherein said flexible thermally conductive assembly further comprises a first surface and a second surface, further comprising a plurality of hydrocarbons disposed on said first surface.

47. (withdrawn) The method of claim 46, further comprising a plurality of hydrocarbons disposed on said second surface.

48. (withdrawn) The method of claim 46, wherein said thermally conductive assembly further comprises a pressure sensitive adhesive disposed on said second surface.

49. (withdrawn) The method of claim 36, wherein said flexible thermally conductive assembly further comprises a first surface and a second surface, further comprising a pressure sensitive adhesive disposed on said first surface.